



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,007	11/08/2005	Matthew P.J. Baker	GB 030181	4551
24737	7590	07/01/2009	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			BATISTA, MARCOS	
P.O. BOX 3001			ART UNIT	PAPER NUMBER
BRIARCLIFF MANOR, NY 10510			2617	
MAIL DATE		DELIVERY MODE		
07/01/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/556,007	Applicant(s) BAKER ET AL.
	Examiner MARCOS BATISTA	Art Unit 2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 April 2009.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-42 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-42 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application
6) Other: _____

DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on 04/20/2009. Claims 1-42 are still pending in the present application. This Action is made **Non-FINAL**.

Response to Arguments

2. Applicant's arguments with respect to claims 11-14, 28-31, and newly added claims 39-42 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed on 04/20/2009 with respect to claims 1, 18, 15, 32, 34-36 and 38 have been fully considered but they are not persuasive.

After carefully revising the office action pertinent to the present response in regard to claims 1 and 18 of the Applicant's remarks, 1 main point(s) have been identified:

1) The Applicant states that "Das is silent with regard to an interruption of the quality reporting from the mobile station, and specifically does not address changing the time of reporting based on an interruption of the power control loop or the quality reporting" (refer to page 9 lines 6-12 of the Applicant's remarks).

2) The Applicant states that the teaching of Cudak of "suspending the generating of the first reports during the interruption" is incorrect (refer to page 12 lines 4-5 of the Applicant's remarks).

3) The Applicant states that Cheng does not teach “scheduling an interruption in the power control loop process or the reports received from the mobile station,” (refer to page 13 lines 12-16 of the Applicant’s remarks).

Regarding point 1), Das clearly teaches “an interruption of the quality reporting from the mobile station, and changing the time of reporting based on an interruption of the quality reporting” (see fig. 2, pars. 0016 lines 3-7, 0017 lines 1-24, 0018 lines 1-4 - where Das discusses that when the base station is not transmitting data to the mobile stations, the channel quality information is reported to the base station every two 2 slot, and when the mobile station is receiving data from the base station, the channel quality information is reported to the base station every slot. In par. 0018 lines 1-4, Das teaches that when the base station ends the transmission of data to the mobile station, the channel quality information resumes to be reported to the base station every two 2 slot. This constitutes an interruption in the channel quality information from every 2 slot to every slot, because when the base station signal to the mobile station that there is no more data to be sent, the reporting at every 2 slots is changed to every slot. Examiner acknowledges that the reporting interruption is not due to the power control loop, however, claim 1 reads “the power control loop or the quality reporting,” the alternative form of the claim is being used; and as claimed, the interruption of the cited reference is related to the quality reporting from the mobile station).

Regarding point 2), Cudak clearly teaches “suspending the generating of the first

reports during the interruption." At paragraph 21 lines 21-30, Cudak teaches "*For example, in a second embodiment, the channel quality reporting continues by the remote station until no data remains queued to be transmitted to that remote station at the base station. The remote unit knows that there is no remaining data queued when it successfully receives a data packet associated with an indicator that a channel quality report message is no longer required. The indicator is typically the queue status transmitted as a last packet indicator. In a third embodiment, the channel quality reporting continues by the remote station for a predetermined period of time,*" and at paragraph 21 lines 21-30, Cudak teaches "*It is possible to combine the first and third embodiments such that the TIMEOUT field is used in conjunction with the PERSISTENCE field to provide alternative criteria for the remote station to stop the transmission of channel quality reports. For example if the TIMEOUT field is set to N, the remote station would continue channel quality reports for no more than N repetitions as in a third embodiment. Consistent with the previous description, a remote station will discontinue channel quality reports when a downlink packet is delivered before the timeout expires.*" The cited teachings present above from Cudak clearly suggest that the mobile station suspends the transmission of the channel quality which in fact constitutes an interruption of the channel quality reporting.

Regarding point 3), Cheng clearly teaches "scheduling an interruption in the power control loop process or the reports received from the mobile station." Cheng, at paragraph 34 lines 18-25 "*Data packet transmission on the forward link from serving cell a to the MS and CQI on the reverse link between the MS and the serving cell a occurs until the CSD time out at which time all transmissions between serving cell a and the MS stop. Transmission*

of the data from target cell b to the MS should begin at the end of the CSD which is normally the time for target cell b to be set up as the new serving cell and to acquire the necessary radio resources." As described above, the mobile station will continue to transmit CQI to the serving cell until the end of the CSD (Cell Switching Delay) time out (at the end of the time out period, the scheduled delay for transmitting CQI from the mobile to the serving cell is suspended temporarily). The transmission of the CQI is resumed right after the end of the time out period, but now the mobile transmits CQI with the target cell.

Therefore, the argued features are written such that they read upon the cited reference(s).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-10, 16-27, 33, and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apostolides et al. (US 6829226 B1), hereafter "Apostolides," in view of Das et al. (US 20030087605 A1), hereafter "Das."

Consider claim 1, Apostolides discloses a mobile station (16) for use in a communication system having a base station (18), the mobile station comprising power control signal generation means for generating a power control signal for enabling the base station to adjust its transmit power level in accordance with a power control loop

process (see figs.1 and 4, col. 6 lines 53-61), report generation means for generating reports from measurements of a characteristic of a signal received from the base station (see figs.1 and 4, col. 6 lines 48-50), transmitter means for transmitting the reports and the power control signal to the base station (see fig. 4, col. 6 lines 48-61).

Apostolides, however, does not particular refer to a transmission control means adapted to control a time of transmission of the reports such that first of the reports are transmitted at a predetermined sequence of times and, in response to an interruption in the power control loop process or the transmitting of the reports, and for a period existing at least one of before, during and after the interruption, to control a time of transmission of one or more second of the reports at times that are not coincident with the predetermined times.

Das, teaches a transmission control means adapted to control a time of transmission of the reports such that first of the reports are transmitted at a predetermined sequence of times (see fig. 2, par. 0016 lines 3-7) and, in response to an interruption in the power control loop process or the transmitting of the reports, and for a period existing at least one of before, during and after the interruption, to control a time of transmission of one or more second of the reports at times that are not coincident with the predetermined times (see par. 0017 lines 7-24).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Apostolides and have it include a transmission control means adapted to control a time of transmission of the reports such that first of the reports are transmitted at a predetermined sequence of times and,

in response to an interruption in the power control loop process or the transmitting of the reports, and for a period existing at least one of before, during and after the interruption, to control a time of transmission of one or more second of the reports at times that are not coincident with the predetermined times, as taught by Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (**see par. 0017 lines 7-24**).

Consider claim 2, Apostolides as modified by Das teaches claim 1, Apostolides further teaches wherein the power control signal comprises power control commands (see col. 6 lines 50-52).

Consider claim 3, Apostolides as modified by Das teaches claim 1, Das further teaches wherein the report generation means is adapted to generate at least one of the second reports from a measurement of shorter duration than a measurement duration used to generate the first reports (see par. 0016 lines 14-18).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 4, Apostolides as modified by Das teaches claim 1, Das further teaches wherein the report generation means is adapted to generate an earliest report

transmitted after an end of the interruption from a measurement commenced before the end of the interruption (see par. 0018 lines 1-4).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 5, Apostolides as modified by Das teaches claim 1, Das further teaches wherein the transmission control means is adapted to select, in response to an indication of a length of the interruption, a start time of the period for which the second reports are transmitted (see par. 0019 lines 1-5).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 6, Apostolides as modified by Das teaches claim 1, Das further teaches wherein the transmission control means is adapted to select, in response to an indication of a length of the interruption, a duration of the period for which the second reports are transmitted (see par. 0019 lines 1-5).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data

exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 7, Apostolides as modified by Das teaches claim 1, Das further teaches wherein the transmission control means is adapted to select, in response to an indication of a length of the interruption, a number of the second reports to be transmitted in the period (see par. 0019 lines 1-5).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 8, Apostolides as modified by Das teaches claim 1, Das further teaches wherein a duration of the period for which the second reports are transmitted is predetermined (see par. 0020 lines 4-7).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 9, Apostolides as modified by Das teaches claim 1, Das further teaches wherein a number of the second reports transmitted in the period is

predetermined (see par. 0020 lines 4-7).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 10, Apostolides as modified by Das teaches claim 1, Das further teaches wherein the period terminates when a next predetermined time occurs (see par. 0020 lines 16-19).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 16, Apostolides as modified by Das teaches claim 1, Das further teaches wherein the transmission control means is adapted to, after one or more second reports have been transmitted, apply a time shift to the predetermined sequence of times for the transmission of subsequent first reports (see par. 0020 lines 4-7, 16-19).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 17, Apostolides as modified by Das teaches claim 1, Apostolides further teaches radio communication system comprising a base station (**18**) and at least one mobile station (**16**) as claimed in claim 1 (see fig. 1, col. 6 lines 48-50).

Consider claims 18-27 and 33, these claims discuss the same subject matter as claims 1-10 and 16 respectively. Therefore, they have been analyzed and rejected based upon the rejection to claim 1-10 and 16.

Consider claim 39, Apostolides discloses a mobile station (**16**) for use in a communication system having a base station (**18**), the mobile station comprising: a receiver (**see fig. 4, #102**); a controller (**see fig. 4, #112**) that is configured to: generate power control signals that enable the base station to adjust its transmit power level in accordance with a power control loop process (**see figs.1 and 4, col. 6 lines 53-61**), generate reports from measurements of a characteristic of a signal received from the base station (**see figs.1 and 4, col. 6 lines 48-50**), and control a time of transmission of the reports (**see col. 6 line 62 - col. 7 line 1**); and a transmitter that is configured to transmit the power control signals and the reports (**see fig. 4 #104, col. 6 lines 49-52**);

Apostolides, however, does not particular refer to wherein the controller controls the time of transmission of the reports such that the reports are transmitted at a first rate and, in response to an interruption in the power control loop process or the transmitting of the reports, the reports are transmitted at a second rate that is higher than the first rate.

Das, teaches wherein the controller controls the time of transmission of the reports such that the reports are transmitted at a first rate and (see fig. 2, par. 0016 lines 3-7), in response to an interruption in the power control loop process or the transmitting of the reports, the reports are transmitted at a second rate that is higher than the first rate (see par. 0017 lines 7-24).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Apostolides and have it include a wherein the controller controls the time of transmission of the reports such that the reports are transmitted at a first rate and, in response to an interruption in the power control loop process or the transmitting of the reports, the reports are transmitted at a second rate that is higher than the first rate, as taught by Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 40, Apostolides as modified by Das teaches claim 39, Das further teaches wherein the controller is configured to generate at least one of the second reports from a measurement of shorter duration than a measurement duration used to generate the first reports (see par. 0016 lines 14-18).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

Consider claim 41, Apostolides as modified by Das teaches claim 39, Das further teaches wherein the controller is configured to select, in response to an indication of a length of the interruption, at least one of: a start time of the period for which the second reports are transmitted (see par. 0019 lines 1-5).

It would have been obvious to have modified Apostolides' invention with the teaching of Das. The motivation would have been in order to be able to maintain data exchange synchronization between the mobile and the base station after a delay (see par. 0017 lines 7-24).

5. Claims 11-14, 28-31, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apostolides et al. (US 6829226 B1), hereafter "Apostolides," in view of Das et al. (US 20030087605 A1), hereafter "Das," further in view of Baker et al. (US 20020016179 A1), hereafter "Baker."

Consider claims 11-14, Apostolides as modified by Das teaches claim 1, but neither Apostolides nor Das particular refer to wherein the transmission control means is adapted to terminate the period in response to an indication of convergence of the power control loop process; wherein the indication of convergence is a signal received from the base station; wherein the transmitter control means is adapted to generate the indication of convergence in accordance with a predetermined criterion; wherein the predetermined criterion includes a reversal of the sign of at least one power control command.

Baker teaches wherein the transmission control means is adapted to terminate the period in response to an indication of convergence of the power control loop (see pars. 0028 lines 1-4, 0035 lines 1-9); wherein the indication of convergence is a signal received from the base station (see par. 0033 lines 10-13); wherein the transmitter control means is adapted to generate the indication of convergence in accordance with a predetermined criterion (see pars. 0024 lines 9-13, 0032 lines 1-8); wherein the predetermined criterion is a reversal of the sign of at least one power control command (see par. 0032 lines 1-8).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Apostolides as modified by Das and have it include wherein the transmission control means is adapted to terminate the period in response to an indication of convergence of the power control loop; wherein the indication of convergence is a signal received from the base station; wherein the transmitter control means is adapted to generate the indication of convergence in accordance with a predetermined criterion; wherein the predetermined criterion is a reversal of the sign of at least one power control command, as taught by Baker. The motivation would have been in order to synchronize a power transmission level between the base station and the mobile station (see pars. 0028 lines 1-4, 0035 lines 1-9).

Consider claims 28-31, these claims discuss the same subject matter as claims 11-14 respectively. Therefore, they have been analyzed and rejected based upon the rejection to claim 11-14.

Consider claim 42, Apostolides as modified by Das teaches claim 39, but neither Apostolides nor Das particular refer to wherein the controller is configured to resume sending the reports at the first rate in response to an indication of convergence of the power control loop process (see par. 0033 lines 1-13). The motivation would have been in order to synchronize a power transmission level between the base station and the mobile station (see pars. 0028 lines 1-4, 0035 lines 1-9).

6. Claims 15 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apostolides et al. (US 6829226 B1), hereafter "Apostolides," in view of Das et al. (US 20030087605 A1), hereafter "Das," further in view of Cudak et al. (US 20050289256 A1), hereafter "Cudak."

Consider claim 15, Apostolides as modified by Das teaches claim 1, but neither Apostolides nor Das particular refer to wherein the report generation means is adapted to suspend generation of the first reports during the interruption.

Cudak teaches wherein the report generation means is adapted to suspend generation of the first reports during the interruption (see par. 0053 lines 1-5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Apostolides as modified by Das and have it include wherein the report generation means is adapted to suspend generation of the first reports during the interruption, as taught by Cudak. The motivation would have been in order to allow the base station to better manage its resources by controlling the

transmission of quality report from the mobile station (see par. 0055 lines 1-8).

Consider claim 32, this claim discusses the same subject matter as claim 15. Therefore, it has been analyzed and rejected based upon the rejection to claim 15.

7. Claims 34-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apostolides et al. (US 6829226 B1), hereafter "Apostolides," in view of Das et al. (US 20030087605 A1), hereafter "Das," further in view of Cheng et al. (US 20040246917 A1), hereafter "Cheng."

Consider claim 34, this claim discusses similar subject matter as claim 1. Therefore, it has been analyzed and rejected based upon the rejection to claim 1. In addition, claim 34 also states scheduling means for scheduling an interruption in the power control loop process or the reports received from the mobile station. However, Apostolides as modified by Das does not particular refer to the above mentioned feature.

Cheng, in analogous art, teaches a base transceiver stations configured to activate a delay process (i.e., scheduling an interruption) in the reports received from the mobile station (see pars. 0026 lines 6-8, 0033 lines 7-12 and 19-23, 0034 lines 18-22).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Apostolides as modified by Das and have

it include a base transceiver stations configured to activate a delay process (i.e., scheduling an interruption) in the reports received from the mobile station, as taught by Cheng. The motivation would have been in order to prepare the system for a hand off (see par. 0033 lines 1-26).

Consider claims 35-36, these claims discuss the same subject matter as claims 2 and 5 respectively. Therefore, they have been analyzed and rejected based upon the rejection to claim 2 and 5.

Consider claim 38, this claim discusses the same subject matter as claim 5. Therefore, it has been analyzed and rejected based upon the rejection to claim 5.

8. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Apostolides et al. (US 6829226 B1), hereafter "Apostolides," in view of Das et al. (US 20030087605 A1), hereafter "Das," in view of Cheng et al. (US 20040246917 A1), hereafter "Cheng," further in view of Baker et al. (US 20020016179 A1), hereafter "Baker."

Consider claim 37, Apostolides as modified by Das and Cheng discusses the invention of claim 34. However, Apostolides alone or combined does not particularly refer to wherein the scheduling means is adapted to determine an end time of the period in response to an indication of convergence of the power control loop process.

Baker teaches wherein the scheduling means is adapted to determine an end time of the period in response to an indication of convergence of the power control loop process (see par. 0027 lines 1-23).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Apostolides as modified by Das and Cheng and have it include wherein the transmission control means is adapted to terminate the period in response to an indication of convergence of the power control loop, as taught by Baker. The motivation would have been in order to synchronize a power transmission level between the base station and the mobile station (see pars. 0028 lines 1-4, 0035 lines 1-9).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Marcos Batista, whose telephone number is (571) 270-5209. The Examiner can normally be reached on Monday-Thursday from 8:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached at (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Marcos Batista/
Examiner

/Rafael Pérez-Gutiérrez/
Supervisory Patent Examiner, Art Unit 2617

06/24/2009